



U.S. FISH and WILDLIFE SERVICE
BUREAU of LAND MANAGEMENT
NATIONAL PARK SERVICE
BUREAU of INDIAN AFFAIRS

Guidelines for Writing 2004 Fisheries Resource Monitoring Program Investigation Plans



The purpose of these guidelines is to assist potential investigators in preparing investigation plans for projects that have been selected for further consideration through the Fisheries Resource Monitoring Program proposal review process. Details contained in investigation plans allow Fisheries Information Services Division staff and Technical Review Committee members to fully evaluate each study and rank them according to strategic priorities, technical-scientific merit, investigator expertise, and contribution to partnership-capacity building. (See Appendix A for detailed evaluation criteria.) These evaluations are then used to select projects to include in a Draft Annual Resource Monitoring Plan that will be available for review by Regional Advisory Councils and the public beginning in September 2003. The Federal Subsistence Board will make the final recommendations. Funding decisions by the Federal Subsistence Board will be made in December 2003.

If you need technical assistance developing and writing a investigation plan, contact the Office of Subsistence Management, Fisheries Information Services Division at 907-786-3645 or E-mail: kathy_orzechowski@fws.gov

Investigation plans should be clear and concise: no longer than ten to fifteen pages in total length (not including references and appendices). Each investigation plan must be accompanied by an executive summary and detailed project budget. Electronic copies of each investigation plan and executive summary must be submitted in Microsoft Word. Electronic copies of the project budget must be submitted in Microsoft Excel. One electronic copy and one paper copy of each investigation plan, executive summary and project budget must be **received by the Fisheries Information Services Division by May 16, 2003.**

Submit all copies to:

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Guidelines for Fisheries Resource Monitoring Program Investigation Plans

Format: An example of a project executive summary is provided at the end of this document. Investigators should use the same format provided for both the Fisheries Resource Monitoring Program Investigation Plan and the executive summary. The font style and size for these documents should be Times Roman 12 point. An Excel spreadsheet for the detailed project budget is available on the web at <http://alaska.fws.gov/asm/home.html> or on CD. To attain a CD please contact Kathy Orzechowski, phone: 907-786-3645 or email: kathy_orzechowski@fws.gov.

Title: Use a short, descriptive title that captures the primary purpose or goal of the study.

Investigator(s): Include name(s), agency or organization, address, phone number, email (if available), FAX number, and Tax ID Number (individuals or organizations with non-profit status). If the proposal includes more than one investigator identify the principal investigator first.

Cost: 2004 \$ _____ **Project Dates:** _____ (beginning and ending months and years)
2005 \$ _____
2006 \$ _____
Total \$ _____

Geographic Area: List the region where project will be conducted (Appendix B). If a project spans more that one region list it as “inter-regional”.

Latitude/Longitude Coordinates: Global Positioning System coordinates for projects with a specific project location.

Federal Conservation System Unit: List the specific National Forest, National Park, National Preserve, National Wildlife Refuge, or Wild and Scenic River that the study addresses.

Information Type: List the primary type of information the study will address: Harvest Monitoring and Traditional Ecological Knowledge (HM/TEK), or Stock Status and Trends (SST).

Issue Addressed: Describe in detail the reason(s) for gathering this information and its connection to federal management of subsistence fisheries. The investigator should identify how, where, and when the subsistence fishery takes place within a Federal Conservation System Unit. This information can be found in the 2003-2004 Federal Subsistence Fisheries Regulations. The investigator must also ensure that the species harvested is recognized as a federal subsistence resource with a customary and traditional use determination (included in the regulations under “customary and traditional uses”). In addition, investigators need to demonstrate how this project will address specific federal subsistence fisheries management issues or data needs identified by local residents, organizations, Regional Advisory Councils, and the Federal Subsistence Board. For more information refer to 2004 Issues and Information Needs. Both the 2003-2004 Federal Subsistence Fisheries Regulations and the 2004 Issues and Information Needs can be found on the web at <http://alaska.fws.gov/asm/home.html>.

Quantification of Subsistence Use: Provide a description of the extent and depth of subsistence use of the particular resource proposed for study. This use may be expressed as the actual number or pounds harvested, and/or the number of families or villages using the resource, as well as the extent of use over time. Possible sources for this type of information include the Alaska Department of Fish and Game's Community Profile Database or the Technical Paper Series of the Alaska Department of Fish and Game, Division of Subsistence, or the Annual Management Reports (AMRs) of the Division of Commercial Fisheries.

Background: Describe the ecological, cultural, and fishery context for the project. This information should provide the basis for defining key questions or hypotheses addressed by the study. The investigator should provide a review of pertinent information and past literature on the subject. This review should include information from published literature, agency and organization reports, as well as unpublished information from files, discussions, etc. All sources of published information must be cited in the text (author and year within parentheses) and listed in the References section (see below). All sources of unpublished information are cited in the text only (name, affiliation, personal communication).

Objectives: Numerically list project objectives in the sequence they will be completed. Project objectives need to be as clear as possible, and need to be stated as measurable and achievable. Once a project receives Federal Subsistence Board approval for funding, the objectives are used to develop the funding documents and become the measure of success for a project (See Appendix C for additional guidance). Clear objectives are essential to judge the importance, relevance, and cost-effectiveness of the proposed work. The objectives of the proposed investigation must be linked to federal subsistence fisheries issues and data needs. If there are multiple investigators, clearly articulate which investigator is responsible for which objectives.

Methods: Describe how each study objective will be met. Clearly link a specific set of procedures to the accomplishment of each objective. This section should contain enough detail to allow reviewers to understand how the study will be conducted, including how data will be collected and analyzed. A description of the proposed study site, including a map, must be included in this section. To improve clarity, the Methods section should be divided into subsections that represent different components of the study:

- **Study Design:** For each objective, describe experimental and sampling designs and provide rationale for selecting them. Address sample sizes, sample dates, sampling effort, and methods of sampling. Cite references containing more detail. For example, the Traditional Ecological Handbook (Miraglia, 1998; available from Alaska Department of Fish and Game, Division of Subsistence) is a good source of widely accepted guidelines for designing, conducting, and participating in traditional ecological knowledge (TEK) studies. (Also see Appendix D for references to standard fishery sampling techniques and the American Fisheries Society's Guidelines for Use of Fish in Field Research; and Appendix E for additional information about TEK from the World Wide Web).
- **Data Collection and Reduction:** Describe the data collected from each sample, and the protocols for collecting them. Describe the path the data will take after they leave "the field." Include descriptions of data editing, the media used to record data, and the software used to store data.

- **Data Analysis:** Describe the analytical procedures to be use. Cite references as appropriate. There should be a description of the analysis that will provide estimates of each parameter identified in the objectives.

Performance Ability: Describe the ability of the investigator, agency, or organization to successfully perform all work associated with the proposed study. When several individuals, agencies or organizations participate in a study, the role and responsibilities of each participant should be clearly identified. Include a description of any technical-scientific and administrative experience in performing similar work. List past reports and professional journal articles published by the investigator(s) that are relevant to the proposed study. Unpublished work relating to the ability of an investigator, agency, or organization to accomplish study objectives should also be described. Reprints, letters of reference and support, and any additional evidence of performance ability may be included as an appendix.

Consultations: Provide a summary of ongoing consultations with rural communities, tribes, organizations and agencies. Attaching letters of support for a project can strengthen a proposal. The purpose of consultation is to ensure that local communities and organizations are aware of, and support the proposed project. To the greatest practical extent, consultations are also intended to identify opportunities for local communities and organizations to participate in projects. All projects must observe appropriate research ethics. For projects involving interviews with local residents, this includes: informed consent; respect for local tradition and language; protection of privacy, dignity, and confidentiality; acknowledgement of local contributions; and return of results to participating communities. (Also see Appendix F for the National Science Foundation's Principles for the Conduct of Research in the Arctic).

Potential for Partnership and Capacity Development: Describe the ways in which this study will develop partnerships and build the capacity of individuals, agencies, and organizations to meaningfully participate in management of federal subsistence fisheries. Describe specific plans to hire and train local residents for work on the projects. Indicate whether this study will provide opportunities to develop professional capabilities and administrative skills of rural and tribal individuals and organizations. Summarize how the project will promote increased interaction among subsistence users, tribes, organizations, communities, and agencies in information gathering, data analysis, reporting, and information sharing.

Deliverables/Products: Describe the products to be developed during the course of the project. Minimum requirements for projects include one concise project performance report due December 1 each year of the study; one Annual Report due May 1 each year of the project; and a Final Report due at the completion of the project. For one-year projects, as well as the last year of multi-year project, a Final Project Report is required that describes fulfillment of all objectives and includes an abstract, introduction, methods, results and discussion. For details of these deliverables see Appendix G.

Schedule: Estimate the beginning and completion dates for critical segments of the study, including all deliverable and provide this information in tabular form.

Example: Fish Creek Counting Tower Project Schedule

Task	Jan-Feb	Mar-Apr	May-Jun	Jul-Aug	Sep-Oct	Nov-Dec
Start up			May 1, 2004			
Sampling			May 11-Jun, 2004	Jul-Aug 1, 2004		
Data Entry				Jul 2-Aug 9, 2004		
Analysis					Sep 6-Oct 31, 2004	
Report Writing						Dec 1, 2004
Final Report			May 1, 2004			

Key Word Referencing: Provide a list of words to characterize your project for information management purposes. These words should include such items as the subsistence management region, drainage or water body, fish species, fish stock, life stage, study method, and information type (Harvest Monitoring, Traditional Ecological Knowledge, Stock Status and Trends).

References: Provide complete citations for published literature referenced in the above sections.

For example:

Beacham, T.D. 1982. Fecundity of Coho Salmon (*Onchorhynchus kisutch*) and Chum Salmon (*O. keta*) in the northeast Pacific Ocean. Canadian Journal of Zoology 60: 1463-1469.

Coffing, M.C. 1991. Kwethluk Subsistence: Contemporary Land Use Patterns, Wild Resource Harvest and Use, and the Subsistence Economy of a Lower Kuskokwim River Area Community, Alaska Department of Fish and Game, Division of Subsistence, Juneau, Technical Paper No. 157.

Executive Summary (Provide as a separate document): Each investigator must provide a concise summary description of the proposed investigation to be included in the draft 2004 Fisheries Resource Monitoring Plan. Executive summaries **must not** exceed two pages. An example of a project executive summary is provided at the end of this document. Investigators should employ the format provided in the example and attach the summary to the full investigation plan.

Detailed Project Budget (Provide as a separate document in Excel): For recipients outside of the Federal government, annual appropriations by Federal Fiscal Year should be budgeted as follows.

Year of Project	Timeframe for Budget
Year 1	Start of project (usually April 1) – December 31 (or end of project if only one year)
Year 2	January 1 (year 2) – December 31 (or end of project if two years duration)
Year 3	January 1 (year 3) – End of Project

Provide a separate budget for each state agency, federal agency and non-agency participant; as well as a total budget for the entire project. For example if a proposed project contains three investigators, each directly requesting funds from the Fisheries Resource Monitoring Program, the budget should contain three separate Agency Summary Tables (one for each investigator), plus the Budget Summary Table for the entire cost of the project. An example of the Excel Spreadsheet can be found in Appendix H.

- **Direct Costs** are those costs that can be specifically identified with conducting the proposed project. Direct costs need to be itemized for the proposed project; and generally include personnel, travel, contractual, materials and supplies, and equipment. Personnel costs should include the sum of salary and benefit costs. Personnel costs should be divided into permanent full-time positions, and temporary /seasonal positions. Each position should be listed independently. Costs for personnel must be broken down into months budgeted and the monthly cost.
- **Indirect Costs** are costs that cannot be specifically identified with conducting the proposed project, but would be incurred by the investigating agency as a result of administering the proposed project. Indirect costs generally include space rental, utilities, postage, data processing, training, safety management, affirmative action programs, administra-

tive support, and supervisory oversight. Since indirect costs cannot be itemized, they are computed as a percentage of total direct costs. The percent indirect rate should be stated, as well as the actual request for indirect costs. Tribal organizations should use their “provisional or final rate.” The composition of items included in the indirect costs need to be described in the comment section after the Budget Summary Table.

- **Matching Funds** is defined as additional direct costs the agency or organization will provide to conduct the proposed study. These funds come from a source other than the Fisheries Resource Monitoring Program (i.e. matching funds are not part of the request to OSM). The source of matching funds, and the purpose to which these funds are put, must be described. Examples of matching funds would include personnel, equipment, office space, and support staff. Matching funds is entered in the Budget Summary Table.
- **Local Hire** is defined as personnel costs for federally qualified subsistence users. It can consist of directly hiring rural or native residents as personnel; or sub-contracting with rural or native organizations to provide personnel. Local hire costs are presented in the budget as a subset of personnel costs.

Executive Summary

Example

FIS 04-026: East Fork Andreafski River Weir Operations

Investigators: Bering Sea Fisherman's Association

Geographic Area: Yukon River

Information Type: Stock and Status Trends

Issue:

Investigators will collect data on all components (early, middle, and late) of escapement of salmon to the Andreafski River in order to help fishery managers avoid over harvest of any single component.

Objectives:

- 1) Count chinook, coho, and chum salmon escapement in the Andreafski River.
- 2) Estimate chinook, coho, and chum salmon age-sex-length (ASL) such that the estimates are within 10% of the actual estimate 95% of the time.

Methods:

Investigators will install a resistance board weir across the East Fork Andreafski River 26.7 miles upstream from the Yukon River. The weir will direct upstream migrating adult salmon through passage areas where fish will be counted. A live trap and passing chute installed near mid-channel will allow fish to pass through and sampling to be done during low water periods. Investigators will count fish (by species) as they pass through the live trap. Investigators will also record water temperatures, water levels, and weather conditions (wind speed and direction, cloud cover, and precipitation). Fish sampling will include measuring length, determining sex, collecting scales, examining fish for gill net marks, and then releasing fish up-stream from the weir. Local technicians will be hired by the Yupiit of Andreafski (Y of A) and the Algaaciq Tribal Council (ATC) and will be trained by the Alaska Department of Fish and Game to observe and count chinook, chum, and coho salmon. Enhancing local knowledge of the methods and techniques used to manage fish stocks is a benefit in the continuation of this project.

Products:

ATC and Y of A will summarize the technicians' findings in a brief progress report delivered to Office of Subsistence Management, Fisheries Information Services Division by December 1 each year of the project. The Bering Sea Fisherman's Association (BSFA), in collaboration with state and federal agencies, will prepare an annual report that will include all data collected, a description of that data, and a summary of the entire project. The annual report will be delivered to Office of Subsistence Management, Fisheries Information Services Division by May 1, 2005 and May 1, 2006. A final report will be delivered to the Office of Subsistence Management, Fisheries Information Services Division by April 15, 2007.

Experience of Investigators:

The BSFA is directed by a 13-member board made up of local fishermen from Bristol Bay, the Yukon/Kuskokwim delta region, Norton Sound, Kotzebue, and St. Paul. The BSFA monitors current issues on behalf of village fishermen and directs scientific research. Since 1994, BSFA has been receiving congressional funds for research and restoration of depressed salmon stocks in Western Alaska. Karen Gillis, Grant Management Specialist for the BSFA will manage this project. Ms. Gillis has worked with the Western Alaska Salmon Research and Restoration programs for seven years, assisting with management of over 32 projects each year. Mr. Jude Henzler, Executive Director of the BSFA, will provide oversight on this project. Mr. Henzler has a long history within the arena of Bering Sea issues and politics since his employment with BSFA in 1987. Mr. Henzler has been a successful facilitator between agencies, councils, and other organizations.

Partnerships/Collaboration:

BSFA has administered the Y of A and ATC portions of this project since 1995, working in close cooperation with the Y of A, ATC, and U.S. Fish and Wildlife Service staff to assure both project cohesiveness and ensure that data is of a level acceptable for management use. This project encourages local involvement in the management and rebuilding of salmon stocks and promotes local hire.

Budget:

Total Project Costs:

	State	Federal	Non-Agency	Total
2004				
2005				
2006				

Local Hire Costs (these costs included in Total Project Costs, above):

	State	Federal	Non-Agency	Total
2004				
2005				
2006				

Matching Funds

	State	Federal	Non-Agency	Total
2004				
2005				
2006				